REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and the following remarks.

Applicants have amended Claim 1 to address the objection raised under 35 USC § 112. Favorable reconsideration is respectfully solicited.

Claims 4, 5, 9-13, 17 and 18 stand rejected under 35 USC § 102(b) as being anticipated by Martin et al, No. 3,978,315 ("Martin"). In addition, Claims 1-3, 6-8 and 14-16 stand rejected under 35 USC § 103(a) as being unpatentable over Martin in view of Alexander, No. 3,110,571, or Flaitz et al, No. 4,764,341, or Strange et al, No. 5,728,638, or Rousset et al, No. 5,462,903, or Howard et al, No. 5,227,345. Reconsideration of these rejections is respectfully requested.

Independent Claims 1, 4 and 11 claim a ceramic cooktop comprising, inter alia, a thermally sprayed electrically conducting intermediate layer. Contrary to the Examiner's characterization of the prior art, none of the cited references disclose this feature. In fact, the primary reference, Martin, does not disclose any thermally sprayed layers.

Instead, Martin discloses in the Example in column 9 a coating of a paste containing a powdered crystallizable zinc aluminosilicate glass that is applied to a cleaned lower surface of a glass ceramic plate. The paste is applied by doctor blade, is dried thereafter and is fired to sinter and crystallize the paste. Then a protective coating, consisting essentially of cordierite is applied to the protectively-coated portions of the bottom surface of the plate.

Again this protective layer is applied in the form of a paste. This paste is air dried by heating and finally sintered to form a non-porous insulating cordierite layer.

An application in the form of a paste followed by a drying and sintering process is completely different from an application by thermal spraying.

A thermally sprayed coating has completely different characteristics than a coating formed by sintering.

Although Martin in column 9, line 4, discusses "a typical manufacturing process", bonding by a suitable conductive film is all that is disclosed. "Conventional methods" for applying the element materials to ceramic surfaces are utilized for applying the element materials to ceramic surfaces and for bonding them to the barrier layer material.

However, apart from using binder and paste materials, Martin does not disclose any other method for applying a coating layer to a substrate.

Moreover, thermal spraying is not a "conventional method" of applying a bonding layer to a substrate. This is due to the fact that a bonding layer usually involves some kind of adhesive forces effected by either chemical interactions or by surface interactions.

By contrast, thermal spraying, due to the high impact velocity and heat applied, achieves more mechanical adhesion of the thermally sprayed material to the surface.

Moreover, none of the additional references cited in the rejection of independent Claim 1, namely Alexander and Flaitz et al, disclose any thermally sprayed layer.

Alexander discusses ceramic materials bonded to a metal having refractory oxide particles dispersed therein.

To form a bond between the refractory oxide filler material and the metal, the metal is heated to melting. The molten metal is brought into contact with the refractory material. The bonding is effected by solidifying the bonding metal, as by cooling. Flaitz

et al merely discloses an intermediary oxide, such as Al_2O_3, Cr_2O_3, TiO_2 or ZrO_2 which is applied to a substrate surface in the form of a paste and is then fired to create a temperature resistant ternary oxide.

The example discusses a nickel paste with possible additions of Al_2O_3, Ca_2O_3, TiO_2 or ZrO_2 and subsequent sintering after application of the paste.

Finally, none of the cited secondary references obviate the above-noted deficiencies.

Thus, it is respectfully submitted that the cited art fails to teach a thermally sprayed intermediate layer according to the features of claims 4 and 11. In addition, the cited art fails to teach, according to Claim 1, an oxide layer that is rendered electrically conductive by oxygen loss during thermal spraying.

Therefore, pending Claims 1-18 are believed to define patentable subject matter. Favorable reconsideration is respectfully solicited. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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